

FET Preamp Kit Building Manual



Effect Pedal Kits:

The **FET Preamp** is inspired in the legendary **BOSS FA1 FET** amp, a discontinued pedal made famous by The Edge. With this kit you have the opportunity to build a replica of this rare gem! The FET Preamp features a **Baxandall 2-band tone circuit** control that gives full control over the tone, avoiding the need for other tone shaping pedals. The FET Preamp is a very **clean boost** perfect to get a bit more of volume or help your tube amp to break up in a natural and warm way.

The only improvement made over the original Boss FA-1 is the use of a **True Bypass switch** to avoid tone loss when turning it off.

The FET Preamp has the following potentiometers:

- The LOW SPDT chooses between a flat response and a low cut
- Treble and Bass set up the equalization of the sound
- Vol acts as a master volume control

BOM (1/2)

Resistors (16)				Capacitors (11)			
2	R1, R3	1M		1	C1	10n	
3	R2, R7, R13	10k		4	C2, C5, C6, C11	10u (electrolytic)	
1	R4	22k		1	C3	47n	
1	R5	6.8k		1	C4	470n	
2	R6, R9	15k		2	C7, C8	33n	
2	R8, R10	470k		2	C9, C10	4.7n	
2	R11, R14	8.2k					
1	R12	33k					
1	R15	470					
1	R16	100k					

BOM (2/2)

Diodes, Transistors and ICs			Generic Parts and Potentiometers			
1 1	U1 Q1	TL072 J113	1 Battery clip 1 DC Jack 1 RLED		1k LED resistor	
			1 1 2	SPDT IN, OUT	6.35mm Jacks	
			2 1 1	50kB (Linear) Potentiometer 1MA (Logarithmic) Potentiometer SPDT	BASS, TREB VOL LOW	

Component Placement



Board Layouts

<u>3PDT PCB</u>



Effect PCB



Building Tips

1- Pay attention to the **orientation of the 3PDT**! In the following picture you can see how the 3PDT pins should be positioned (inserting the pins in the holes can be a bit tight to avoid movement while soldering):



2- For a proper soldering you just have to apply the **right amount of solder wire**. A right solder joint should have a concave shape around the joint and look like this:



- 3- Don't apply too much heat! When soldering, the time you hold the solder iron against the joint should be **as short as posible** to avoid damaging any part (a few seconds should be enough). If you can't get a solder joint right, **let it cool** a bit before trying again.
- 4- If having troubles with the building, checking the schematic in the last page will help you find **where the audio signal stops**. When you find the spot, check out that **everything around that joint is ok** (components placed at their right place, solder joints...).

Building Tips

5- Pay attention to the **parts that have a polarity** and make sure they are connected as in the component placement picture:

- <u>ICs</u> (they have a small dot or indication that must fit the indication in the board

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0		0	0	0
ο	111	0	0	0
0	0.	0	0	0
0		0	0	0
0		0	0	0
0		0	0	0

- **<u>Electrolytic capacitors</u>** (longer pin is connected to the "+" hole):



- **Diodes** (check for the mark and make it fit with the one in the PCB):



- Leds (longer pin is connected to the "+" hole)



- **Transistors** (inserted to fit the drawing in the PCB)



Building Tips

6- With the kit we include plastic PCB supports with an adhesive bottom. You can use them to anchor the PCB to your enclosure for a better stability. Just insert the PCB support tip into the 3.5mm holes and remove the adhesive protective film.



To avoid any issue always check the latest building manual. Use the pictures only as a reference! Colors/shapes of wires, PCB or parts can change slightly, this doesn't affect their functionality in any way.

Always double check part polarity, resistor and capacitor values, potentiometer placement, IC orientation... before soldering.

Schematic



